

### **Abstract**

An apparatus and method for imaging metallic nanoparticles. The invention teaches an apparatus and method for detection of gold colloid particles and for accurate reporting to the operator. The apparatus includes a substrate holder for  
5 holding the substrate, a processor and memory device, an imaging module, an illumination module, a an input module, and an output module. The apparatus may have a stationary substrate holder and imaging module which are proximate to one another. The apparatus provided for a compact system without the need for complex motorized devices to move a camera across the substrate. Further, the apparatus and  
10 method provide for automatic detection of the spots/wells on the substrate, automatic quantification of the spots on the substrate, and automatic interpretation of the spots based on decision statistics.